

Appl. No. 10/692,613  
Amendment dated February 14, 2006  
Reply to Office action of December 30, 2005  
Attorney Docket K-2043

**Amendments to the Drawings:**

The attached four (4) drawing sheets depicting Figures 1-6 replaces the originally-filed three (3) sheets depicting Figures 1-6. The attached four (4) drawing sheets are provided to replace the originally-filed drawing sheets with acceptable drawings. No new matter has been added.

Attachment: Four (4) Replacement Sheets

One (1) Annotated Sheet

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### REMARKS/ARGUMENTS

Claims 17, 24, 25 and 46-49 are pending in the application. By this Amendment, Claim 17 is amended, Claims 18-23 and 26-45 are canceled, and Claims 46-49 are added. Favorable reconsideration of the application is respectfully requested.

1. The Office action rejects Claims 17, 27 and 37 under 35 U.S.C. 102(b) over Shimomura et al. (U.S. Patent No. 4,714,383, hereinafter "Shimomura"), or in the alternative, under 35 U.S.C. 103(a) over Shimomura. The rejection is respectfully traversed.

Amended independent Claim 17 specifies, *inter alia*, a rotary cutting tool wherein the first and second corners of each insert lie within the nominal cutting diameter when the cutting tool is rotated about the rotational axis, and wherein the highpoint of the first cutting insert and the first end of the second cutting insert are substantially circumferentially aligned with each other when the rotary cutting tool is rotated about the rotational axis.

Shimomura discloses an insert 24 for a rotary cutter including a front face 30, a flat rear face 32, and four side faces 34. The insert 24 includes a pair of cutting edges 36 defined by the front face 30 and on pair of the opposite side faces 34. The pair of opposite side faces 34 slope inwardly in a direction away from the front face 30, and serve as rake surfaces 38 for the main cutting edges 36. The rake surfaces 38 are convexly curved in such a manner that the width of the insert 24 between the rake surfaces 38 is the smallest at the foremost and rearmost ends 36a, 36b of each main cutting edge 36, and the largest at the central portion 36c of the main cutting edge 36. (*See Fig. 21; col. 6, lines 4-33*).

In one embodiment, a rotary cutter 10c includes of plurality of pockets 20c and recesses 22c disposed adjacent to a respective pocket 20c. The inserts 24a are mounted in the recesses 22c in such a manner that the inserts 24a are disposed in an overlapping relation when the cutter 10c is viewed in a circumferential direction. One of the main cutting edges 36 of each insert 24a is indexed in its peripheral cutting position, and one of the corner cutting edges 42 of each of the two inserts 24a closest to a forward end face of the cutter body 12c is indexed in its face cutting position. (*See Fig. 35; col. 8, lines 47-66*).

It is respectfully submitted that there is no mention in Shimomura of at least the feature of a rotary cutting tool wherein the first and second corners of each insert lie within the nominal cutting diameter when the cutting tool is rotated about the rotational axis, and wherein the highpoint of the first cutting insert and the first end of the second cutting insert

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are substantially circumferentially aligned with each other when the rotary cutting tool is rotated about the rotational axis, as recited in amended Claim 17..

For at least this reason, Claim 17 is allowable over the applied art. Claims 24, 25 and 46-49, which depend from Claim 17, are likewise allowable over the applied art. Withdrawal of the rejection is respectfully requested.

2. The Office action rejects Claims 18-26, 28-36 and 39-45 under 35 U.S.C. 103(a) over Shimomura. The rejection is respectfully traversed.

It is respectfully submitted that the Office action fails to establish a *prima facie* case of obviousness for several reasons. See *MPEP* §2143. One reason is that the cited reference does not disclose, teach or suggest all the claim limitations, as recited in amended Claim 17. Specifically, it is respectfully submitted that there is no mention in the cited reference of at least the feature of first and second corners of each insert lying within the nominal cutting diameter when the cutting tool is rotated about the rotational axis, and a highpoint of the radius curve of the first cutting insert and the first end of the second cutting insert being substantially circumferentially aligned with each other.

In addition, it is noted that the Office action admits that Figure 35 of Shimomura does not teach that the centerline of the first insert overlapping the first end of the second insert by more than half the length of the cutting edge of the first cutting insert. However, the Office action asserts that it would have been obvious to vary the overlap between inserts because it has been held that discovering an optimum value of a result effective variable involved only routine skill in the art. Applicant disagrees with this assertion.

Although the cited case law (*In re Boesch*) may be true for a particular situation in which the general conditions of a claim are disclosed in the cited reference, this situation does not exist in the present application. Thus, the cited case law does not apply to the claimed invention.

Another reason why the Office action fails to establish a *prima facie* case of obviousness is that there is no teaching, suggestion, or motivation from the cited reference for the person of ordinary skill to have combined or modified the references. Specifically, Section 103 requires some reason, suggestion, or motivation from the prior art as a whole for the person of ordinary skill to have combined or modified the references. The Federal Circuit has stated that:

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“ [o]bviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.”<sup>1</sup>

Accordingly, one prior art reference alone is generally not used to support an obviousness rejection because, by definition, more than one source of information must support such a rejection. As stated by the Federal Circuit,

“[i]f it is necessary to reach beyond the boundaries of a single reference to provide missing disclosure of the claimed invention, the proper ground is not Section 102 anticipation, but Section 103 obviousness.”<sup>2</sup>

For the above reasons, it is respectfully submitted that the Office action fails to establish a *prima facie* case of obviousness.

For at least this reason, Claims 24, 25 and 46-49, which depend from Claim 17, are allowable over the applied art. Withdrawal of the rejection is respectfully requested.

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable consideration and prompt allowance of the application is earnestly solicited.

Should Examiner Addisu believe anything further would be desirable in order to place the application in better condition for allowance; the Examiner is invited to contact the undersigned attorney at the telephone number listed below.

It is believed that any additional fees due with respect to this paper have already been identified. However, if any additional fees are required in connection with the filing of this paper, permission is given to charge account number 50-3145 in the name of Honigman Miller Schwartz and Cohn LLP.

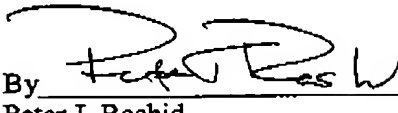
<sup>1</sup> *In re Geiger*, 815 F.2d 686, 2 USPQ 2d 1276, 1278 (Fed. Cir. 1987); *Diversitech Corp. v. Century Shops, Inc.*, 850 F.2d 675-79, 7 USPQ 2d 1315, 1318 (Fed. Cir. 1988).

<sup>2</sup> *Scripps Clinic & Research Found. v. Genetech Inc.*, 927 F.2d 1565, 1577, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

Appl. No. 10/692,613  
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Respectfully submitted,

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